445978

From: Sent:

T:

Portner, Ginny

Thursday, May 15, 2003 11:37 AM

STIC-ILL

Smith, Lynette

Cc: Subject:

09/380,846; references requested for lactate dehydrogenase claims

Importance:

High

06146078 89161496 PMID: 2922510

Enzyme variation and pathogenicity of recent field isolates of Eimeria

tenella.

Shirley M W; Chapman H D; Kucera J; Jeffers T K; Bedrnir P

Institute for Animal Health, Houghton Laboratory, Huntingdon,

Research in veterinary science (ENGLAND) Jan 1989, 46 (1) p79-83,

Research in Veterinary Science (ENGLAN ISSN 0034-5288 Journal Code: 0401300 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

From:

Portner, Ginny Thursday, May 15, 2003 11:39 AM STIC-ILL

Sent:

To: Cc:

Subject:

Smith, Lynette 09/380,846; references requested for lactate dehydrogenase claims

Imp rtance:

High

03844132 82256366 PMID: 7103889

Attenuation of a strain of Eimeria mivati of U.S. origin by serial

embryo passage.
Long P L; Johnson J; Gore T C
Avian diseases (UNITED STATES) Apr-Jun 1982, 26 (2) p305-13, ISSN 0005-2086 Journal Code: 0370617

Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12

(703) 308-7543

Fr m: Sent:

Portner, Ginny Thursday, May 15, 2003 11:38 AM STIC-ILL

To:

Cc: Subject: Smith, Lynette 09/380,846; references requested for lactate dehydrogenase claims

4427277 84069417 PMID: 6646805 Studies to determine the taxonomic status of Eimeria mitis, Tyzzer 1929 Studies to determine the taxonomic status of Eimeria mitis, Tyzzer 1929 and E. mivati, Edgar and Seibold 1964.
Shirley M W; Jeffers T K; Long P L
Parasitology (ENGLAND) Oct 1983, 87 (Pt 2) p185-98, ISSN 0031-1820
Journal Code: 0401121
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

1

From:

Portner, Ginny

Thursday, May 15, 2003 11:43 AM Sent:

To: Cc:

STIC-ILĹ

Subject:

Smith, Lynette 09/380,846

00241090 BIOSIS NO.: 000050056090

EIMERIA -STIEDAE CYTOCHEMICAL IDENTIFICATION OF ENZ ACID PHOSPHATASE AND ENZ ALKALINE PHOSPHATASES ENZ CARBOXYLIC ESTER HYDROLASES AND ENZ SUCCINATE DEHYDROGENASE ENZ LACTATE DEHYDROGENASE AND ENZ GLUCOSE-6 PHOSPHATE DEHYDROGENASE IN ENDOGENOUS STAGES FROM RABBIT TISSUES

AUTHOR: FRANDSEN J C

JOURNAL: EXP PARASITOL 23 (3). 398-411. 1968. (1968

FULL JOURNAL NAME: Experimental Parasitology

CODEN: EXPAA

RECORD TYPE: Citation

Ginny Rottner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

Vol NO 5/15 445988

From:

Portner, Ginny

Sent:

Thursday, May 15, 2003 11:42 AM STIC-ILL

To: Cc:

Subject:

Smith, Lynette 09/380,846; reference for updated search

00547925 69079196 PMID: 5701763

Eimeria stiedae: cytochemical identification of acid and alkaline phosphatases, carboxylic ester hydrolases, and succinate lactate and glucose-6-phosphate dehydrogenases in endogenous stages from rabbit

Frandsen J C

Experimental parasitology (UNITED STATES) Dec 1968, 23 (3) p398-411, ISSN 0014-4894 Journal Code: 0370713 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM

Record type: Completed Subfile: INDEX MEDICUS

Tags: Animal

Ginny Zortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

VD 105/15 4495928

From:

Portner, Ginny

S nt: To:

Thursday, May 15, 2003 11:41 AM

STIC-ILL Smith, Lynette

Cc: Subject:

09/380,846; references requested for lactate dehydrogenase claims

Importance:

01460771 73083928 PMID: 4346146 Enzymes of coccidia: surification and properties of L-lactate dehydrogenase from Eimeria stiedae.

dehydrogenase from Eimeria stiedae.
Frandsen J C; Cooper J A
Experimental parasitology (UNITED STATES) Dec 1972, 32 (3) p390-402, ISSN 0014-4894 Journal Code: 0370713
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS
Tags: Animal

Tags: Animal

Ginny Cortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

From:

Portner, Ginny

Thursday, May 15, 2003 11:36 AM

S nt: To:

STIC-ILL Smith, Lynette

Cc: Subject:

09/380,846; references requested for lactate dehydrogenase claims

Importance:

07362256 92225423 PMID: 1808028

Enzyme variants of Eimeria parasitizing the domestic fowl and

possibilities of species diagnostics.

Kucera J

Research Institute for Feed Supplements and Veterinary Drugs, Prague,

Czechoslovakia.

Folia parasitologica (CZECHOSLOVAKIA) 1991, 38 (3) p193-9, ISSN 0015-5683 Journal Code: 0065750

Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Cortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

STIC-ILL .

From: S nt: To:

Portner, Ginny

Thursday, May 15, 2003 11:40 AM STIC-ILL Smith, Lynette

Cc:

Subject:

09/380,846; references requested for lactate dehydrogenase claims

02903907 79078933 PMID: 726560 Electrophoretic variation of enzymes: a further marker for genetic

Shirley M W
Zeitschrift fur Parasitenkunde (Berlin, Germany) (GERMANY, WEST) Sep 4
1978, 57 (1) p83-7, ISSN 0044-3255 Journal Code: 8710749
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner, NLM

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Rortner
CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

From: Sent:

Portner, Ginny

Thursday, May 15, 2003 11:42 AM

To: Cc: Subject: STIC-ILL Smith, Lynette 09/380,846

Importance:

10929135 97281360 PMID: 9135668

Monoclonal antibodies against lactate dehydrogenase of Plasmodium knowlesi.

Kaushal D C; Kaushal N A; Chandra D
Division of Microbiology, Central Drug Research Institute, Lucknow,

Indian journal of experimental biology (INDIA) Jan 1995, 33 (1) p6-11, ISSN 0019-5189 Journal Code: 0233411 Document type: Journal Article Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Cortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703).308-7543

From:

Portner, Ginny

Sent:

Thursday, May 15, 2003 11:40 AM

To:

STIC-ILL

Cc: Subject: Smith, Lynette 09/380,846; references requested for lactate dehydrogenase claims

02477294 77167679 PMID: 859094

Isoelectric focusing of coccidial enzymes.
Shirley M W, Lee D L
Journal of parasitology (UNITED STATES) Apr 1977, 63 (2) p390-2,
ISSN 0022-3395 Journal Code: 7803124
Document type: Journal Article
Languages: ENGLISH
Main Citation Owners NI M

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Tags: Animal

Descriptors: Eimeria --enzymology--EN; Isoelectric Focusing; Isoenzymes; Lactate Dehydrogenase --isolation and purification--IP CAS Registry No.: 0 (Isoenzymes)
Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase)
Record Date Created: 19770630

Record Date Completed: 19770630

Ginny Rortner
CM1, Art Unit 1645
Room 7e13 Mail box 7e12 (703) 308-7543

10568963

NO 5/15

From:

Portner, Ginny

Sent:

Thursday, May 15, 2003 11:43 AM

To:

STIC-ILL

Cc: Subject: Smith, Lynette 09/380,846

Importance: .

High

06736560 90362597 PMID: 2144028
Identification of Eimeria brunetti using glucose phosphate isomerase and lactate dehydrogenase

Nakamura T; Kawaguchi H; Imose J Aburahi Laboratories, Shionogi Research Laboratories, Shionogi & Co.,

Ltd., Shiga, Japan.

Nippon juigaku zasshi. The Japanese journal of veterinary science (JAPAN)

Aug 1990, 52 (4) p859-60, ISSN 0021-5295 Journal Code: 0057113

Document type: Journal Article

Languages: ENGLISH

Mail Collection Courses All Mail Collections (Statistical Courses All Mail Collections)

Main Citation Owner: NLM Record type: Completed

Ginny Cortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

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Temp SearchSave "TD698" stored
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   S EIMER?/TI (100N) (LACTATE? (2N) DEHYDROGENA?)
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Ref
               3
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N1
N2
               3
                   399: CA SEARCH(R) 1967-2003/UD=13820
                   50: CAB Abstracts_1972-2003/Apr
N3
               2
                   155: MEDLINE(R)_1966-2003/May W2
               2
N4
               2* 398: CHEMSEARCH (TM) _1957-2003/Apr
N5
N6
               2
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                    10: AGRICOLA 70-2003/May
N7
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NR
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N9
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                   144: Pascal 1973-2003/May W1
N10
               1
   15 files have one or more items; file list includes 281 files.
   * One or more search terms are invalid in this file
        - Enter P or PAGE for more -
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            $6.36
                     3.180 DialUnits File411
     $6.36 Estimated cost File411
     $0.46 TELNET
     $6.82 Estimated cost this search
     $7.08 Estimated total session cost 3.261 DialUnits
SYSTEM:OS - DIALOG OneSearch
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         (c) format only 2003 The Dialog Corp.
*File 155: Medline has been reloaded and accession numbers have
changed. Please see HELP NEWS 155.
  File
         5:Biosis Previews(R) 1969-2003/May W2
         (c) 2003 BIOSIS
        5: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 399:CA SEARCH(R) 1967-2003/UD=13820
         (c) 2003 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 50:CAB Abstracts 1972-2003/Apr
         (c) 2003 CAB International
*File 50: Truncating CC codes is recommended for full retrieval.
See Help News50 for details.
  File 398:CHEMSEARCH(TM) 1957-2003/Apr
         (c) 2003 Amer.Chem.Soc.
*File 398: Use is subject to the terms of your user/customer agreement.
Problems with SORT. RANK charge added. See HELP RATES 398.
  File 440:Current Contents Search(R) 1990-2003/May 15
         (c) 2003 Inst for Sci Info
*File 440: Daily alerts are now available.
  File 10:AGRICOLA 70-2003/May
         (c) format only 2003 The Dialog Corporation
        34:SciSearch(R) Cited Ref Sci 1990-2003/May W1
         (c) 2003 Inst for Sci Info
*File 34: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
       94:JICST-EPlus 1985-2003/May W1
         (c) 2003 Japan Science and Tech Corp (JST)
  File 144:Pascal 1973-2003/May W1
         (c) 2003 INIST/CNRS
  File 340:CLAIMS(R)/US Patent 1950-03/May 13
         (c) 2003 IFI/CLAIMS(R)
*File 340: The Claims U.S. Patent databases have been reloaded.
 HELP NEWS340 & HELP ALERTS340 for search, display & Alert info.
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save temp

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File 342:Derwent Patents Citation Indx 1978-01/200301
         (c) 2003 Thomson Derwent
*File 342: Updates 200160-200209 replaced. See HELP NEWS 342.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 345: Inpadoc/Fam. & Legal Stat 1968-2003/UD=200318
         (c) 2003 EPO
  File 357: Derwent Biotech Res. 1982-2003/May W2
         (c) 2003 Thomson Derwent & ISI
*File 357: File is now current. See HELP NEWS 357.
Alert feature enhanced for multiple files, etc. See HELP ALERT.
  File 654:US PAT.FULL. 1976-2003/May 13
         (c) FORMAT ONLY 2003 THE DIALOG CORP.
*File 654: Reassignments current through Feb. 7, 2003
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          321385 LACTATE?
          650445 DEHYDROGENA?
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>>>Duplicate detection is not supported for File 398.
>>>Duplicate detection is not supported for File 340.
>>>Duplicate detection is not supported for File 342.
>>>Duplicate detection is not supported for File 345.
>>>Duplicate detection is not supported for File 654.
>>>Records from unsupported files will be retained in the RD set.
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in RD set
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?t s2/3,kwic/all
>>>KWIC option is not available in file(s): 398, 399
 2/3, KWIC/1
              (Item 1 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
06736560
          90362597 PMID: 2144028
   Identification of Eimeria brunetti using glucose phosphate isomerase
and lactate
             dehydrogenase .
 Nakamura T; Kawaguchi H; Imose J
  Aburahi Laboratories, Shionogi Research Laboratories, Shionogi & Co.,
Ltd., Shiga, Japan.
  Nippon juigaku zasshi. The Japanese journal of veterinary science (JAPAN)
  Aug 1990, 52 (4) p859-60, ISSN 0021-5295 Journal Code: 0057113
 Document type: Journal Article
 Languages: ENGLISH
 Main Citation Owner: NLM
 Record type: Completed
   Identification of
                       Eimeria brunetti using glucose phosphate isomerase
and lactate dehydrogenase.
 2/3, KWIC/2
               (Item 2 from file: 155)
DIALOG(R) File 155: MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
01460771 73083928 PMID: 4346146
   Enzymes of coccidia: purification and properties of L- lactate
dehydrogenase from Eimeria stiedae.
 Frandsen J C; Cooper J A
 Experimental parasitology (UNITED STATES) Dec 1972, 32 (3) p390-402,
```

Document type: Journal Article

Languages: ENGLISH Main Citation Owner: NLM Record type: Completed

Enzymes of coccidia: purification and properties of L- lactate dehydrogenase from Eimeria stiedae.

2/3,KWIC/3 (Item 1 from file: 5) DIALOG(R)File 5:Biosis Previews(R) (c) 2003 BIOSIS. All rts. reserv.

01204544 BIOSIS NO.: 000056014746

ENZYMES OF COCCIDIA PURIFICATION AND PROPERTIES OF L LACTATE

DEHYDROGENASE EC-1.1.1.27 FROM EIMERIA -STIEDAE

AUTHOR: FRANDSEN J C; COOPER J A

JOURNAL: EXP PARASITOL 32 (3). 1972 (RECD 1973) 390-402. 1972

FULL JOURNAL NAME: Experimental Parasitology

CODEN: EXPAA

RECORD TYPE: Citation

ENZYMES OF COCCIDIA PURIFICATION AND PROPERTIES OF L LACTATE DEHYDROGENASE EC-1.1.1.27 FROM EIMERIA -STIEDAE

2/3, KWIC/4 (Item 2 from file: 5) DIALOG(R) File 5:Biosis Previews(R) (c) 2003 BIOSIS. All rts. reserv.

00241090 BIOSIS NO.: 000050056090

EIMERIA -STIEDAE CYTOCHEMICAL IDENTIFICATION OF ENZ ACID PHOSPHATASE AND ENZ ALKALINE PHOSPHATASES ENZ CARBOXYLIC ESTER HYDROLASES AND ENZ SUCCINATE DEHYDROGENASE ENZ LACTATE DEHYDROGENASE AND ENZ GLUCOSE-6 PHOSPHATE DEHYDROGENASE IN ENDOGENOUS STAGES FROM RABBIT TISSUES

AUTHOR: FRANDSEN J C

JOURNAL: EXP PARASITOL 23 (3). 398-411. 1968. 1968

FULL JOURNAL NAME: Experimental Parasitology

CODEN: EXPAA

RECORD TYPE: Citation

EIMERIA -STIEDAE CYTOCHEMICAL IDENTIFICATION OF ENZ ACID PHOSPHATASE AND ENZ ALKALINE PHOSPHATASES ENZ CARBOXYLIC ESTER HYDROLASES AND ENZ DEHYDROGENASE AND ENZ GLUCOSE-6 SUCCINATE DEHYDROGENASE ENZ LACTATE PHOSPHATE DEHYDROGENASE IN ENDOGENOUS STAGES FROM RABBIT TISSUES

2/3,KWIC/5 (Item 1 from file: 399)

DIALOG(R) File 399:CA SEARCH(R)

(c) 2003 American Chemical Society. All rts. reserv.

CA: 126(20)263156h PATENT 126263156

Eimeria lactate dehydrogenase cDNA sequence and vector and vaccine for protecting poultry against coccidiosis

INVENTOR (AUTHOR): Kok, Jacobus Johannes; van den Boogaart, Paul;

Vermeulen, Arnoldus Nicolaas

LOCATION: Neth.

ASSIGNEE: Akzo Nobel N.V.

PATENT: Canada Pat Appl ; CA 2180309 AA DATE: 19970104 APPLICATION: CA 2180309 (19960702) *EP 95201801 (19950703)

PAGES: 50 pp. CODEN: CPXXEB LANGUAGE: English CLASS: C12N-015/53A;

C12N-009/04B; C07K-016/40B; A61K-039/012B

(Item 1 from file: 398) 2/3,KWIC/6

DIALOG(R) File 398: CHEMSEARCH (TM)

(c) 2003 Amer.Chem.Soc. All rts. reserv.

CAS REGISTRY NUMBER: 188856-68-0

MOLECULAR FORMULA: Unknown

CA NAME(S):

HP=Dehydrogenase, lactate (Eimeria acervulina strain Houghton) (9CI)

2/3, KWIC/7 (Item 2 from file: 398)

DIALOG(R) File 398: CHEMSEARCH (TM)

(c) 2003 Amer.Chem.Soc. All rts. reserv.

CAS REGISTRY NUMBER: 187043-46-5

MOLECULAR FORMULA: Unknown

REPLACED CAS REGISTRY NUMBER(S): 188856-67-9

CA NAME(S):

HP=DNA (swine clone pWSPH.01 cytidine monophosphoacetylneuraminate monooxygenase cDNA plus flanks) (9CI)

HP=DNA (pig clone pWSPH.01 cytidine monophosphoacetylneuraminate monooxygenase cDNA plus flanks)

SYNONYMS: Deoxyribonucleic acid (pig clone pWSPH.01 cytidine monophosphoacetylneuraminate monooxygenase cDNA plus flanks); DNA (Eimeria acervulina strain Houghton lactate dehydrogenase cDNA plus flanks)

2/3, KWIC/8 (Item 1 from file: 340)

DIALOG(R) File 340:CLAIMS(R)/US Patent

(c) 2003 IFI/CLAIMS(R). All rts. reserv.

3365083 0024872

C/COCCIDIOSIS POULTRY VACCINE; NUCLEIC ACIDS ENCODING AN IMMUNOGENIC FRAGMENT OF EIMERIA LACTATE DEHYDROGENASE (LDH) WHICH WILL REACT WITH ANTISERUM RAISED AGAINST THE LDH; PREPARING A VECTOR VACCINE AGAINST COCCIDIOSIS; ADMINISTERING TO PREVENT COCCIDIOSIS IN BIRDS

Inventors: van den Boogaart Paul (NL); Kok Jacobus Johannes (NL); Vermeulen
Arnodus Nicolaas (NL)

Assignee: Akzo Nobel N V NL

Assignee Code: 33913

 Publication
 Application

 Kind
 Number
 Date
 Number
 Date

 A
 US 6100241
 20000808
 US 96676882
 19960703

 Priority Applic:
 EP 95201801
 19950703

Calculated Expiration: 20160703

...NUCLEIC ACIDS ENCODING AN IMMUNOGENIC FRAGMENT OF EIMERIA LACTATE DEHYDROGENASE (LDH) WHICH WILL REACT WITH ANTISERUM RAISED AGAINST THE LDH; PREPARING A VECTOR VACCINE AGAINST...

2/3, KWIC/9 (Item 1 from file: 342)

DIALOG(R) File 342: Derwent Patents Citation Indx

(c) 2003 Thomson Derwent. All rts. reserv.

02926615 WPI Acc No: 97-109375/11

Eimeria lactate dehydrogenase protein - used for prodn. of vaccines against coccidiosis in poultry

Patent Assignee: (ALKU) AKZO NOBEL NV

Author (Inventor): KOK J J; VAN DEN BOOGAART P; VERMEULEN A N

Patent (basic)

Patent No Kind Date Examiner Field of Search

AU 9656287 A 970116 (BASIC)

Derwent Week (Basic): 9711

Priority Data: EP 95201801 (950703)

Applications: EP 96201818 (960701); NZ 286915 (960701); ZA 965586 (960701); AU 9656287 (960702); CA 2180309 (960702); HU 961809 (960702); JP

96173890 (960703); US 676882 (960703)

Designated States

(Regional): AT; BE; CH; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC;

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NL; PT; SE
Derwent Class: B04; C06; D16
Int Pat Class: A01N-043/04; A61K-031/70; A61K-039/012; C07K-014/435;
    C07K-014/455; C07K-016/20; C07K-016/40; C12N-005/10; C12N-009/04;
    C12N-015/09; C12N-015/30; C12N-015/53; C12N-015/63; C12P-021/02
Number of Patents: 010
Number of Countries: 025
Number of Cited Patents: 017
Number of Cited Literature References: 015
Number of Citing Patents: 000
 2/3,KWIC/10
                    (Item 1 from file: 345)
DIALOG(R) File 345: Inpadoc/Fam. & Legal Stat
(c) 2003 EPO. All rts. reserv.
13451402
                                                               <No. of Patents: 010>
Basic Patent (No, Kind, Date): CA 2180309 AA 19970104
  COCCIDIOSIS POULTRY VACCINE (English; French)
Patent Assignee: AKZO NOBEL NV (NL)
Author (Inventor): KOK JACOBUS JOHANNES (NL); VAN DEN BOOGAART PAUL (NL);
     VERMEULEN ARNOLDUS NICOLAAS (NL)
IPC: *C12N-015/53; C12N-009/04; C07K-016/40; A61K-039/012
CA Abstract No: 126(20)263156H
Language of Document: English
Patent Family:
                   Kind Date
    Patent No
                                     Applic No Kind Date
                  A1 19970116
    AU 9656287
                                         AU 9656287
                                                           A 19960702
    AU 707350
                      B2 19990708
                                         AU 9656287
                                                            A
                                                                 19960702
    CA 2180309 AA 19970104
EP 775746 A2 19970528
EP 775746 A3 19970611
HU 9601809 AB 19970528
JP 9048797 A2 19970218
NZ 286915
                                         CA 2180309
                                                               19960702
                           19970104 CA 2180309 A 19960702

19970528 EP 96201818 A 19960701

19970611 EP 96201818 A 19960701

19970528 HU 969601809 A 19960702

19970218 JP 96173890 A 19960703

19980325 NZ 286915 A 19960701

20000808 US 676882 A 19960703

19970131 ZA 965586 A 19960701
                                                                             (BASIC)
                                                           Α
    NZ 286915
                      Α
    US 6100241
                       Α
    ZA 9605586
                      Α
Priority Data (No, Kind, Date):
    EP 95201801 A 19950703
Dialog File: Inpadoc/Fam. Legal Stat 1968-2003/UD=200318
 2/3,KWIC/11
                    (Item 1 from file: 357)
DIALOG(R) File 357: Derwent Biotech Res.
(c) 2003 Thomson Derwent & ISI. All rts. reserv.
0208588 DBR Accession No.: 97-03709
                                              PATENT
 Eimeria lactate - dehydrogenase protein and DNA - gene cloning and
    vector expression in host cell or organism for fowl recombinant vaccine
    construction against coccidiosis
AUTHOR: Kok J J; van den Boogaart P; Vermeulen A N CORPORATE SOURCE: Arnhem, The Netherlands.
PATENT ASSIGNEE: Akzo-Nobel 1997
PATENT NUMBER: AU 9656287 PATENT DATE: 970116 WPI ACCESSION NO.:
    97-109375
                (9711)
PRIORITY APPLIC. NO.: EP 95201801 APPLIC. DATE: 950703
NATIONAL APPLIC. NO.: AU 9656287 APPLIC. DATE: 960702
LANGUAGE: English
 Eimeria
            lactate - dehydrogenase protein and DNA
 2/3,KWIC/12
                    (Item 1 from file: 654)
DIALOG(R) File 654:US PAT.FULL.
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```

4362359

Derwent Accession: 1997-109375

Utility

C/ Coccidiosis poultry vaccine; NUCLEIC ACIDS ENCODING AN IMMUNOGENIC FRAGMENT OF EIMERIA LACTATE DEHYDROGENASE (LDH) WHICH WILL REACT WITH ANTISERUM RAISED AGAINST THE LDH; PREPARING A VECTOR VACCINE AGAINST COCCIDIOSIS; ADMINISTERING TO PREVENT COCCIDIOSIS IN BIRDS

Inventor: Kok, Jacobus Johannes, Nijmegen, NL

van den Boogaart, Paul, SC Oss, NL Vermeulen, Arnodus Nicolaas, Cuyk, NL

Assignee: Akzo Nobel, N.V. (03), NL

Akzo Nobel N V NL (Code: 33913)

Examiner: Crouch, Deborah (Art Unit: 162)

Assistant Examiner: Martin, Jill D.

Combined Principal Attorneys: Gormley, Mary E.

	Publication Number	Kind Date		Application Number	Filing Date	
			-			
Main Patent	US 6100241	Α	20000808	US 96676882	19960703	
Priority				EP 95201801	19950703	

Fulltext Word Count: 9585...

0929135 97281360 PMID: 9135668

Monoclonal antibodies against lactate dehydrogenase of Plasmodium knowlesi.

Kaushal D C; Kaushal N A; Chandra D

Division of Microbiology, Central Drug Research Institute, Lucknow, India.

Indian journal of experimental biology (INDIA) Jan 1995, 33 (1) p6-11, ISSN 0019-5189 Journal Code: 0233411

Document type: Journal Article

Languages: ENGLISH Main Citation Owner: NLM

Record type: Completed
Subfile: INDEX MEDICUS

Lactate dehydrogenase (LDH) of malarial parasites has been demonstrated to be biochemically and immunochemically distinct from the equivalent host enzyme. The polyclonal antibodies raised against the purified plasmodial LDH showed specificity to Plasmodium spp. Six hybridoma cell lines secreting monoclonal antibodies specific to Plasmodium knowlesi LDH have been obtained. The two monoclonal antibodies (2A3B7 and 4A6A7) showed high reactivity with LDH from simian (P. knowlesi. P. cynomolgi), human (P. falciparum, P. vivax) and rodent (P. berghei, P. yoelii) malarial parasites and did not cross-react with red cell LDH as well as with isoenzymic forms of mammalian LDH (A4, B4 and C4). One monoclonal antibody (4A6A7) strongly inhibited the enzyme activity specifically of plasmodial LDH and did not have any effect on the activity of red cell LDH. The other monoclonal (2A3B7) did not show inhibitory effect on parasite LDH. These findings as well as competitive immunoassay studies suggest the presence of at least two parasite specific epitopes on plasmodial LDH.

Tags: Animal; Human; Support, Non-U.S. Gov't

Descriptors: Antibodies, Monoclonal; * Lactate Dehydrogenase --immunology --IM; *Plasmodium knowlesi--immunology--IM; Antibody Specificity; Enzyme-Linked Immunosorbent Assay

CAS Registry No.: 0 (Antibodies, Monoclonal) Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase)

Record Date Created: 19970604

6	ExPASy Home page	Site Map	Scarch Exp	ASY Cor	නුව ජනවාර	<u>Swiss-Prot</u>
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NiceProt View of TrEMBL: Q8I8U3

Printer-friendly view Quick BlastP search

[General] [Name and origin] [References] [Comments] [Cross-references] [Keywords] [Features] [Sequence] [Tools]

Note: most headings are clickable, even if they don't appear as links. They link to the <u>user manual</u> or other documents.

General information about the entry			
Q8I8U3			
Q8I8U3			
None			
Release 23, March 2003			
Release 23, March 2003			
Release 24, June 2003			
Lactate dehydrogenase			
None			
LDH			
Eimeria maxima [TaxID: <u>5804</u>]			
Eukaryota; Alveolata; Apicomplexa;			
Coccidia; Eimeriida; Eimeriidae; Eimeria.			

[1] SEQUENCE FROM NUCLEIC ACID.

Schaap D.C.;

"Characterization and cloning of lactate dehydrogenase from three

Eimeria species.";

Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

[2] SEQUENCE FROM NUCLEIC ACID.

Niessen R., Schaap D.C.;

Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.

Comments

None

Cross-reference	es es					
EMBL	AY143390;	[EMBL / GenBank / DDBJ]				
CMOL	AAN38977.1;	[CoDingSequence]				
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InterPro	<u>IPRO01557</u> ; L_LDH.					
	Graphical view of domain structure.					
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r i um	PF02866; ldh_C; 1.					
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ProDom	[Domain structure / List	of seq. sharing at least 1 domain].				
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PRESAGE	Q8I8U3.					
ModBase	Q8I8U3.					
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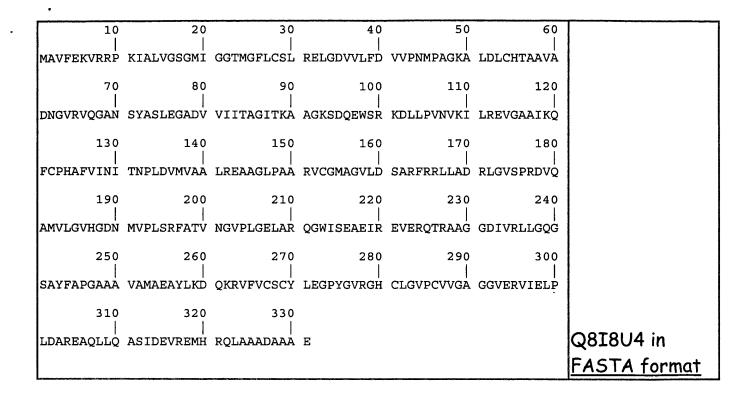
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BLAST submission on

BLAST

ExPASy/SIB

or at NCBI (USA)



Sequence analysis tools: <u>ProtParam</u>, <u>ProtScale</u>, <u>Compute pI/Mw</u>, <u>PeptideMass</u>, <u>PeptideCutter</u>, <u>Dotlet</u> (Java)



ScanProsite, MotifScan



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á	ExPASy H me page	Site Map	Search Expasy	Confort us	Swiss-Prot
	Hosted by NCSC US M	irror sites:	Canada China Ka	rea Switzerla	and Taiwan
	Search Swiss-Prot/TrE	MBL	▼ for	Go	Clear

NiceProt View of TrEMBL: Q818U4

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Printer-friendly view	Quick BlastP search

[General] [Name and origin] [References] [Comments] [Cross-references] [Keywords] [Features] [Sequence] [Tools]

Note: most headings are clickable, even if they don't appear as links. They link to the <u>user manual</u> or other documents.

General information about the er	ntry
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Secondary accession numbers	None
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Sequence was last modified in	Release 23, March 2003
Annotations were last modified in	Release 24, June 2003
Name and origin of the protein	
Protein name	Lactate dehydrogenase
Synonyms	None
Gene name	LDH
From	Eimeria tenella [TaxID: <u>5802</u>]
Taxonomy	Eukaryota; Alveolata; Apicomplexa;
	Coccidia; Eimeriida; Eimeriidae; Eimeria.

[1] SEQUENCE FROM NUCLEIC ACID.

Schaap D.C.;

"Characterization and cloning of lactate dehydrogenase from three Eimeria species.";

Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.

[2]SEQUENCE FROM NUCLEIC ACID.

Arts G., Kroezen H., Schaap D.C.;

Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.

Comments

None

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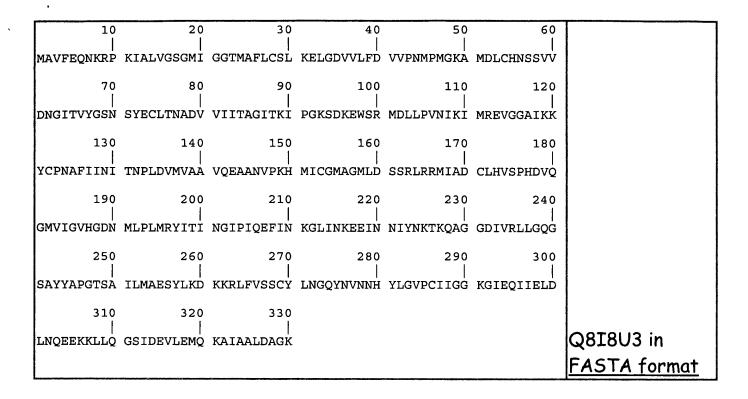
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BLAST submission on ExPASy/SIB or at NCBI (USA)



Sequence analysis tools: <u>ProtParam</u>, <u>ProtScale</u>, <u>Compute pI/Mw</u>, <u>PeptideMass</u>, <u>PeptideCutter</u>, <u>Dotlet</u> (Java)



<u>ScanProsite</u>, <u>MotifScan</u>



Search the <u>SWISS-MODEL</u> <u>Repository</u>



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      Items
              RT Index-term
E37
        260
               4 LACTATE DEHYDROGENASE-ELEVATING VIRUS
                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --ANALYS
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --CHEMIS
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --CLASSI
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --DRUG E
E41
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --ENZYMO
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --GENETI
                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --GROWTH
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --IMMUNO
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --ISOLAT
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         11
                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --METABO
E48
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                  LACTATE DEHYDROGENASE-ELEVATING VIRUS --PATHOG
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E50
          1 LACTATE DEHYDROGENASE-ELEVATING VIRUS -- RADIAT
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      Items Index-term
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          9 LACTATE DEHYDROGENASE-ELEVATING VIRUS --ULTRAS
E2
          1 LACTATE RACEMASE
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        103 LACTATE 2-MONOOXYGENASE
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          1 LACTATEC14
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       1358 LACTATED
E10
         1 LACTATEDECHYDROGENASE
E11
E12
         58 LACTATEDEHYDROGENASE
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S1
                E3-E36
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S2
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                'LACTATE DEHYDROGENASE'
S3
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           27809 S1
                 S2
           27809
           27809
                 S3
            3195 EIMERI?
                 COCCIDI?
            7891
          116381 PARASIT?
            2292
                  MEROZOIT?
            2734
                  SPOROZOIT?
      S4
             237
                  (S1 OR S2 OR S3) AND (EIMERI? OR COCCIDI? OR PARASIT? OR
                  MEROZOIT? OR SPOROZOIT?)
?s s4/1996:2003
             237 S4
         3434468 PY=1996 : PY=2003
      S5
              82
                 S4/1996:2003
?s s4 not s5
             237
                  S4
              82
                  S5
      S6
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                 S4 NOT S5
?s s6/1995
             155
                  S6
          416695
                  PY=1995
      S7
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                  S6 NOT S7
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                  S8
            3216
                  EIMER?
      S9
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DIALOG(R) File 155: MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
07362256
                      PMID: 1808028
           92225423
   Enzyme variants of
                         Eimeria
                                      parasitizing
                                                      the domestic fowl and
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Research Institute for Feed Supplements and Veterinary Drugs, Prague,

1991,

38

(3)

p193-9,

possibilities of species diagnostics.

Document type: Journal Article

parasitologica (CZECHOSLOVAKIA)

Journal Code: 0065750

Kucera J

0015-5683

Czechoslovakia. Folia paras

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Electrophoretic variation of the enzymes lactate dehydrogenase (LDH) and glucosephosphate isomerase (GPI) of **Eimeria parasitizing** the domestic fowl in Czechoslovakia is summarized and the differentiation of species of poultry **coccidia** is discussed. A new method for evaluation of zymograms of **coccidial** enzymes is presented. This method enables the results of different experiments to be compared by calculating standardized rates of mobility of each enzyme band relative to the positions of reference variants coded LDH-8 or GPI-9.

Tags: Animal; Comparative Study; Male

Descriptors: Coccidiosis --veterinary--VE; * Eimeria --classification --CL; *Glucose-6-Phosphate Isomerase--analysis--AN; * Lactate Dehydrogenase --analysis--AN; *Poultry Diseases-- parasitology --PS; Chick Embryo; Chickens; Coccidiosis -- parasitology --PS; Czechoslovakia; Eimeria --enzymology--EN; Electrophoresis, Starch Gel; Poultry; Retrospective Studies

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase)
Record Date Created: 19920518
Record Date Completed: 19920518

9/9/2

DIALOG(R) File 155: MEDLINE(R)

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07299917 92162849 PMID: 1790225

Enzyme variation of Eimeria acervulina and E. tenella isolated from poultry farms in Japan.

Nakamura T; Kawaguchi H; Imose J; Ogimoto K

Aburahi Laboratory, Shionogi Research Laboratories, Shionogi & Co., Ltd., Shiga, Japan.

Journal of veterinary medical science / the Japanese Society of Veterinary Science (JAPAN) Dec 1991, 53 (6) p1101-3, ISSN 0916-7250 Journal Code: 9105360

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Tags: Animal; Comparative Study

Descriptors: Chickens-- parasitology --PS; * Coccidiosis --veterinary--VE; * Eimeria --enzymology--EN; * Eimeria tenella--enzymology--EN; *Poultry Diseases-- parasitology --PS; Coccidiosis -- parasitology --PS; Eimeria --classification--CL; Eimeria tenella--classification--CL; Electrophoresis, Starch Gel; Feces-- parasitology --PS; Glucose-6-Phosphate Isomerase --analysis--AN; Japan; Lactate Dehydrogenase --analysis--AN; Phenotype Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase) Record Date Created: 19920402

9/9/3

DIALOG(R) File 155: MEDLINE(R)

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06920706 91161087 PMID: 2488045

Record Date Completed: 19920402

Starch gel electrophoresis of lactate dehydrogenase and glucose phosphate isomerase of poultry coccidia using the LKB multiphor.

Kucera J

Research Institute of Feed Supplements and Veterinary Drugs, Jilove, Prague, Czechoslovakia.

Folia parasitologica (CZECHOSLOVAKIA) 1989, 36 (4) p295-9, ISSN 0015-5683 Journal Code: 0065750

Document type: Journal Article

Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS A modification of thin-layer starch gel horizontal electrophoresis is described. The original method of Wraxall and Culliford (1986) is improved so that the preparation of starch gel is as simple as preparing the agarose gel. Thus the commercially supplied kits and instruments for the agarose gel electrophoresis can be also used for the starch gel electrophoresis. Furthermore, a method of preparing the permanent dry enzymograms from the starch gels with visualized enzymes is presented. The described procedure was used in the LDH and GPI analyses of poultry coccidia . Tags: Animal Descriptors: Eimeria --enzymology--EN; *Glucose-6-Phosphate Isomerase --analysis--AN; * Lactate Dehydrogenase --analysis--AN; Electrophoresis, Starch Gel; Poultry Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase) Record Date Created: 19910417 Record Date Completed: 19910417 9/9/4 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 90362597 PMID: 2144028 Identification of Eimeria brunetti using glucose phosphate isomerase and lactate dehydrogenase. Nakamura T; Kawaguchi H; Imose J Aburahi Laboratories, Shionogi Research Laboratories, Shionogi & Co., Ltd., Shiga, Japan. Nippon juigaku zasshi. The Japanese journal of veterinary science (JAPAN) Aug 1990, 52 (4) p859-60, ISSN 0021-5295 Journal Code: 0057113 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS Tags: Animal Descriptors: Chickens; * Eimeria --enzymology--EN; *Glucose-6-Phosphate Isomerase--analysis--AN; * Lactate Dehydrogenase --analysis--AN; --diagnosis--DI; Coccidiosis -- parasitology --PS; --veterinary--VE; Eimeria --isolation and purification--IP; Coccidiosis Coccidiosis Electrophoresis, Starch Gel--veterinary--VE; Feces-- parasitology --PS; Poultry Diseases--diagnosis--DI; Poultry Diseases-- parasitology --PS; Species Specificity; Specific Pathogen-Free Organisms Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase) Record Date Created: 19901004 Record Date Completed: 19901004 9/9/5 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 06146078 89161496 PMID: 2922510 Enzyme variation and pathogenicity of recent field isolates of Eimeria tenella. Shirley M W; Chapman H D; Kucera J; Jeffers T K; Bedrnir P Institute for Animal Health, Houghton Laboratory, Huntingdon, Cambridgeshire. Research in veterinary science (ENGLAND) Jan 1989, 46 (1) p79-83, Document type: Journal Article Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed

Subfile: INDEX MEDICUS

Seventy isolates of Bimeria tenella, obtained from commercial poultry farms worldwide and four reference laboratory strains were characterised by studies on the electrophoretic mobility of up to three enzymes. All the same electrophoretic form of lactate populations possessed dehydrogenase and malate dehydrogenase and one of two forms of glucose phosphate isomerase. One isolate was characterised by both forms of glucose phosphate isomerase. Studies on several isolates indicated that there was no correlation between the form of glucose phosphate isomerase found and the pathogenicity of an isolate.

Tags: Animal; Comparative Study

Descriptors: Eimeria --enzymology--EN; *Glucose-6-Phosphate Isomerase --analysis--AN; * Lactate Dehydrogenase --analysis--AN; *Malate Dehydrogenase--analysis--AN; Chickens-- parasitology --PS; Coccidiosis -parasitology --PS; Coccidiosis --veterinary--VE; Eimeria --isolation Eimeria --pathogenicity--PY; Electrophoresis, purification--IP; and Starch Gel; Poultry Diseases-- parasitology -- PS

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 1.1.1.37 (Malate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase)

Record Date Created: 19890411 Record Date Completed: 19890411

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DIALOG(R) File 155: MEDLINE(R)

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05281583 86282848 PMID: 3735889

Isozymes of chicken coccidia in Japan.

Nakamura T; Konishi T; Kawaguchi H Nippon juigaku zasshi. The Japanese journal of veterinary science (JAPAN) Jun 1986, 48 (3) p587-90, ISSN 0021-5295 Journal Code: 0057113

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Tags: Animal

Descriptors: Coccidiosis --veterinary--VE; * Eimeria --enzymology--EN; *Glucose-6-Phosphate Isomerase--genetics--GE; *Isoenzymes--genetics--GE; * Lactate Dehydrogenase --genetics--GE; *Poultry Diseases-- parasitology --PS; Coccidiosis -- parasitology --PS; Eimeria --genetics--GE; Japan; Variation (Genetics)

CAS Registry No.: 0 (Isoenzymes)

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9

(Glucose-6-Phosphate Isomerase) Record Date Created: 19860917 Record Date Completed: 19860917

DIALOG(R) File 155: MEDLINE(R)

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84069417 PMID: 6646805

Studies to determine the taxonomic status of Eimeria mitis, Tyzzer 1929 and E. mivati, Edgar and Seibold 1964.

Shirley M W; Jeffers T K; Long P L

Oct 1983, 87 (Pt 2) p185-98, ISSN 0031-1820 Parasitology (ENGLAND)

Journal Code: 0401121

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

We have examined several taxonomic features of a number of strains of Eimeria from many sources world wide. The strains were isolated on the basis of their small spherical (or sub-spherical) oocysts. From a study of mean oocyst dimensions, electrophoretic variation of enzymes, ability to

develop in embryonated eggs, absence of gross lesions in heavily infected chickens, and cross-immunity, all the strains were found to belong to one species. For convenience, the **parasites** when isolated, were referred to as strains of E. mitis/mivati-type, but after characterization they were clearly found to be E. mitis. In contrast, a laboratory strain of E. mivati supplied to one of us (M.W.S.) was found to be a mixture of E. acervulina and E. mitis. Evidence from these and other studies supports the notion that E. mivati is a nomina dubia.

Tags: Animal; Comparative Study; Male

Descriptors: Chickens-- parasitology --PS; * Eimeria --classification--CL; Body Weight; Cross Reactions; Eimeria --immunology--IM; Eimeria --pathogenicity--PY; Eimeria --physiology--PH; Electrophoresis, Starch Gel; Glucose-6-Phosphate Isomerase--analysis--AN; Immunization; Lactate Dehydrogenase --analysis--AN

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase)

Record Date Created: 19840107 Record Date Completed: 19840107

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DIALOG(R) File 155: MEDLINE(R)

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04090980 83220370 PMID: 6856328

Enzyme activity of the tissues of chicks with coccidiosis (Eimeria tenella)]

Aktivnost' nekotorykh fermentov tkanei tsypliat pri koktsidioze (Eimeria tenella).

Musaev M A; Elchiev Ia Ia; Mamedova G A

Parazitologiia (USSR) Mar-Apr 1983, 17 (2) p95-100, ISSN 0031-1847

Journal Code: 0101672

Document type: Journal Article ; English Abstract

Languages: RUSSIAN

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

It has been established that during experimental infection of chickens with **Eimeria** tenella the decrease in the activity of lactatdehydrogenase of blood serum and the increase of the activity of glutathionereductase in erythrocytes take place. In birds treated with chemcoccid (70 mg/kg of food) the activity of these ferments does not change. The ferment activity of glucose-6-phosphatdehydrogenase does not change in erythrocytes of sick birds while during the treatment with chemcoccid its activity increases. The activity of aspartate aminotransferase decreases in tissues of muscles and increases in liver and brain of sick birds. The activity of alanine aminotransferase decreases in the brain in three and increases in seven days after the infection.

Tags: Animal; Comparative Study

Descriptors: Chickens--metabolism--ME; * Coccidiosis --enzymology--EN; *Poultry Diseases--enzymology--EN; Brain--enzymology--EN; Coccidiosis --veterinary--VE; Erythrocytes--enzymology--EN; Glucosephosphate Dehydrogen ase--blood--BL; Glutathione Reductase--blood--BL; Histocytochemistry; Lactate Dehydrogenase --blood--BL; Liver--enzymology--EN; Muscles --enzymology--EN; Transaminases--metabolism--ME

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 1.1.1.49 (Glucosephosphate Dehydrogenase); EC 1.6.4.2 (Glutathione Reductase); EC 6.1. (Transaminases)

Record Date Created: 19830708
Record Date Completed: 19830708

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DIALOG(R) File 155: MEDLINE(R)

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03844132 82256366 **PMID**: 7103889

Attenuation of a strain of Eimeria mivati of U.S. origin by serial embryo passage.

Long P L; Johnson J; Gore T C Avian diseases (UNITED STATES) Apr-Jun 1982, 26 (2) p305-13, ISSN

0005-2086 Journal Code: 0370617 Document type: Journal Article

Languages: ENGLISH Main Citation Owner: NLM Record type: Completed INDEX MEDICUS Subfile:

A strain of Eimeria mivati (FS50) isolated in Georgia was purified and serially passaged in groups of developing chicken embryos. Starch gel electrophoresis using glucose phosphate isomerase and lactate dehydrogenase showed the parasite to be similar to another strain of E. mivati isolated in the U.S. The embryo-passaged line of E. mivati (FS50) was less pathogenic than the parent line but retained its immunogenicity. This strain may be suitable for inclusion in an improved coccidiosis vaccine. The status of E. mivati and E. mitis is discussed.

Tags: Animal; Male; Support, Non-U.S. Gov't

Descriptors: Chick Embryo-- parasitology --PS; *Chickens-- parasitology --PS; * Eimeria --isolation and purification--IP; *Vaccines, Attenuated --isolation and purification--IP; Coccidiosis --prevention and control--PC Coccidiosis --veterinary--VE; Eimeria --enzymology--EN; --immunology--IM; Eimeria --pathogenicity--PY; Electrophoresis, Starch Gel; Glucose-6-Phosphate Isomerase--analysis--AN; Lactate Dehydrogenase --analysis--AN; Poultry Diseases--prevention and control--PC; Vaccination --veterinary--VE

CAS Registry No.: 0 (Vaccines, Attenuated)

No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9

(Glucose-6-Phosphate Isomerase) Record Date Created: 19820924 Record Date Completed: 19820924

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DIALOG(R)File 155:MEDLINE(R)

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03804681 82216507 PMID: 7086714

The biology and pathogenicity of a recent field isolate of Eimeria praecox Johnson, 1930.

Gore T C; Long P L

Journal of protozoology (UNITED STATES) Feb 1982, 29 (1) p82-5,

ISSN 0022-3921 Journal Code: 2985197R Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

A recent isolate of **Eimeria** praecox, strain G, was obtained from Georgia and purified. Studies of the life history, pathogenicity, and cross-immunity of the isolate were conducted to verify its identity. In inoculated three-week-old chickens, the occurrence of merogony and was limited to the superficial epithelium of the upper gametogony intestine. Oocysts, 23 x 19.5 microns, with a shape index of 1.17 were first observed 83 h after inoculation. Mortality and morbidity were not observed in any of the experimental birds. However, there was a positive correlation between dose of oocysts, reduced weight gain, and the incidence of exudative diathesis. These studies showed that E. praecox depresses weight gains in chickens and may be of economic importance. Although complete immunity to avian coccidiosis is believed to be species specific, chickens immune to E. praecox (G) or E. acervulina had a degree of cross-immunity to a heterologous challenge. Electrophoretic analysis of glucose phosphate isomerase and lactate dehydrogenase prepared from the European strain of E. praecox and E. praecox (G) showed no differences, confirming the identity of the isolate as E. praecox.

Tags: Animal; Male

Descriptors: Chickens-- parasitology --PS; * Eimeria --pathogenicity--PY; *Intestines-- parasitology --PS; Body Weight; Coccidiosis --immunology--IM; Cross Reactions; Eimeria --growth and development--GD; Eimeria --immunology--IM; Glucosephosphate Dehydrogenase--analysis--AN; Isoenzymes

--analysis--AN; Lactate Dehydrogenase --analysis--AN

CAS Registry No.: 0 (Isoenzymes)

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 1.1.1.49

(Glucosephosphate Dehydrogenase) Record Date Created: 19820807 Record Date Completed: 19820807

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DIALOG(R) File 155: MEDLINE(R)

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03068132 79246004 PMID: 471536

A reappraisal of the taxonomic status of Eimeria mivati Edgar and Seibold 1964, by enzyme electrophoresis and cross-immunity tests.

Shirley M W

Parasitology (ENGLAND) Apr 1979, 78 (2) p221-37, ISSN 0031-1820

Journal Code: 0401121

Document type: Journal Article

Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

An examination of 2 strains of **Eimeria** acervulina var. mivati (since 1973 E. mivati has been regarded as a variant of E. acervulina) showed that previous confusion over the taxonomic status of E. mivati arose because the investigations were done using laboratory cultures of E. mivati which were contaiminated with E. acervulina. Electrophoretic analyses of enzymes, host specificity and cross-immunity tests have revealed that: (1) The 1971 Houghton strain of E. acervulina var. mivati was a mixture of 2 **parasites**. (a) Passage of this strain in embryonating eggs resulted in a selection against that **parasite** previously characterized as E. acervulina. (b) The **parasite** which did reproduce in eggs did not immunize chickens against subsequent challenge with E. acervulina. This **parasite** is most likely E. mivati. (c) E. mivati recovered from eggs did, however, immunize chickens against challenge with a new field strain which was morphologically identical to E. mivati and characterized by the same electrophoretic forms of 2 enzymes. (2) A strain of E. acervulina var. mivati from the USA was also a mixture of E. acervulina and E. mivati.

Tags: Animal

Descriptors: Eimeria --classification--CL; Chick Embryo; Cross Reactions; Eimeria --enzymology--EN; Eimeria --immunology--IM; Electrophoresis; Glucose-6-Phosphate Isomerase--analysis--AN; Glucosephosphate Dehydrogenase --analysis--AN; Lactate Dehydrogenase --analysis--AN; Phosphogluconate Dehydrogenase--analysis--AN

Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 1.1.1.43 (Phosphogluconate Dehydrogenase); EC 1.1.1.49 (Glucosephosphate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase)

Record Date Created: 19791024
Record Date Completed: 19791024

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DIALOG(R) File 155:MEDLINE(R)

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02924020 79099449 PMID: 735305

Alteration of enzyme activities in serum of Eimeria stiedai infected rabbits (author's transl)]

Veranderungen der Enzymaktivitaten im Serum bei **Eimeria** stiedai infizierten Kaninchen.

Hein B; Lammler G

Zeitschrift fur Parasitenkunde (Berlin, Germany) (GERMANY, WEST) Nov 27 1978, 57 (3) p199-211, ISSN 0044-3255 Journal Code: 8710749

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

In experimental investigations on Eimeria stiedai infected rabbits, serum enzymatic studies have been carried out in correlation with the examination of parasitological and pathological parameters. The rabbits were orally infected with a single dose of either 100,000 or 250,000 sporulated oocysts. Increase of the activity of the sorbit dehydrogenase (SDH), glutamate oxalate transaminase (GOT), glutamate pyruvate transaminase (GPT) and glutamate dehydrogenase (GlDH) could be found first between 3 and 10 days after infection indicating the beginning of the acute phase of liver coccidiosis . The increase of the conjugated bilirubin and of the gamma-glutamyl-transferase (gamma-GT) could be found not earlier than 10 days after infection and is to be explained as sign of disturbed efficiency of excretion. The various investigated parameters reached their peak of alteration about the end of the prepatent period and at the beginning of patency between 14 and 21 days after infection. The results emphasize the value and usefulness of serum enzymes, particularly the glutamate dehydrogenase (GlDH) and the gamma-glutamyl-transferase (gamma-GT) with about 30fold activity, as indicators in the course of **Eimeria** stiedai infection of rabbits. The enzymes returned to physiological values at the end of the experiment, 42 days after infection. Significant differences could not be detected within the infected groups. The activities of the alkaline phosphatase (AP), leucine aminopeptidase (LAP), choline esterase (ChE), lactate dehydrogenase (LDH) and isoenzym 1 (alpha-HBDH) showed only slight alterations and proved to be no significant parameters for the pathophysiological evaluation of the liver coccidiosis

Tags: Animal; Male

Descriptors: Coccidiosis --enzymology--EN; Bilirubin--blood--BL; Coccidiosis --blood--BL; Coccidiosis -- parasitology --PS; Eimeria --growth and development--GD; Glutamate Dehydrogenase--blood--BL; Hydrolases--blood--BL; Isoenzymes; L-Iditol 2-Dehydrogenase--blood--BL; Lactate Dehydrogenase --blood--BL; Rabbits; Transaminases--blood--BL CAS Registry No.: 0 (Isoenzymes); 635-65-4 (Bilirubin) Enzyme No.: EC 1.1.1.14 (L-Iditol 2-Dehydrogenase); EC 1.1.1.27 (Lactate Dehydrogenase); EC 1.4.1.2 (Glutamate Dehydrogenase); EC 2.6.1. (Transaminases); EC 3. (Hydrolases) Record Date Created: 19790324 Record Date Completed: 19790324

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DIALOG(R) File 155: MEDLINE(R)

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02903907 79078933 PMID: 726560

Electrophoretic variation of enzymes: a further marker for genetic studies of the Eimeria .

Shirley M W

Zeitschrift fur Parasitenkunde (Berlin, Germany) (GERMANY, WEST) Sep 4 1978, 57 (1) p83-7, ISSN 0044-3255 Journal Code: 8710749

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Embryo-adapted strains of **Eimeria** mivati and E. mivati var. diminuta, differing in their sensitivity to sulphaquinoxaline and electrophoretic mobilities of lactate dehydrogenase, were crossed. E. mivati was sulphaquinoxaline-resistant and characterised by an electrophoretic form of the enzyme denoted lactate dehydrogenase-1 whereas E. mivati var. diminuta was sulphaquinoxaline-sensitive and characterised by lactate dehydrogenase-6. Progeny recovered from the cross were passaged in embryonating eggs given sulphaquinoxaline and the (drug-resistant) parasites recovered were characterised by both lactate dehydrogenase-1 and lactate dehydrogenase-6. Controls showed that those parasites characterised by the recombinant phenotype of drug-resistant and lactate dehydrogenase-6 had been produced by the cross-fertilisation of gametes.

Tags: Animal

Descriptors: Eimeria --genetics--GE; * Lactate Dehydrogenase --genetics --GE; *Recombination, Genetic; Chick Embryo-- parasitology --PS; Drug

Resistance, Microbial; Eimeria -- drug effects--DE; Eimeria -- enzymology Eimeria --physiology--PH; Isoenzymes; Lactate Dehydrogenase --biosynthesis--BI; Spores; Sulfaquinoxaline--pharmacology--PD CAS Registry No.: 0 (Isoenzymes); 59-40-5 (Sulfaquinoxaline) Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase) Record Date Created: 19790221 Record Date Completed: 19790221 9/9/14 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 02625433 78051975 PMID: 927886 Strain variations within Eimeria meleagrimitis from the turkey. Long P L; Millard B J; Shirley M W Oct 1977, 75 (2) p177-82, ISSN 0031-1820 Parasitology (ENGLAND) Journal Code: 0401121 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS During the course of a field study of coccidiosis in turkeys, Eimeria occysts were found which had much smaller dimensions that any previously recorded isolate from the turkey. These occysts were purified by single occyst infection of a turkey. The first occysts (mean dimensions 16-15 X 14-75 micrometer) were recovered 103 h later. Inoculation of between 0-5 and 2-5 X 10(5) occysts of this isolate caused severe effects on body weight gain. Cross-immunity studies showed the parasite to be a strain of E. meleagrimitis. Electrophoretic analyses of two enzymes showed that the strain could be differentiated from another strain of E. meleagrimitis (Weybridge strain B). The results show that strain variation occurs within (Weybridge strain B). The results show that strain variation occurs within the species E. meleagrimitis and extreme caution should be used in identifying species of **Eimeria** from the turkey by the oocyst characters. Tags: Animal Descriptors: Eimeria --classification--CL; *Turkeys-- parasitology --PS Eimeria --pathogenicity--PY; Eimeria --physiology--PH; Glucose-6-Phosphate Isomerase--analysis--AN; Lactate Dehydrogenase --analysis--AN; Species Specificity Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase) Record Date Created: 19780127 Record Date Completed: 19780127 9/9/15 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 02625432 78051974 PMID: 927885 Studies on the growth, chemotherapy and enzyme variation of Eimeria acervulina var. diminuta and E. acervulina var. mivati. Shirley M W; Millard B J; Long P L Parasitology (ENGLAND) Oct 1977, 75 (2) p165-76, ISSN 0031-1820 Journal Code: 0401121 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS Eimeria acervulina var. diminuta was serially passaged 12 times in chicken embryos, but growth in cultured chick kidney cells was limited to 2 generations of schizonts. After 7 embryo passages the sensitivities of E. acervulina var. diminuta and an embryo-adapted strain of E. acervulina var.

Eimeria acervulina var. diminuta was serially passaged 12 times in chicken embryos, but growth in cultured chick kidney cells was limited to 2 generations of schizonts. After 7 embryo passages the sensitivities of E. acervulina var. diminuta and an embryo-adapted strain of E. acervulina var. mivati to the anticoccidial drugs amprolium, methyl benzyquate, robenidine and sulphaquinoxaline were compared. Both parasites were sensitive to all the anticoccidials but E. acervulina var. diminuta was more sensitive to sulphaquinoxaline and amprolium. The chicken-maintained strain of E.

extremely sensitive to acervulina var. diminuta was sulphaguinoxaline and decoquinate. Electrophoretic analyses of several enzymes from E. acervulina var. diminuta revealed enzyme profiles with similarities and differences to the embryo-adapted strain of E. acervulina var. mivati. Tags: Animal; Comparative Study Coccidiostats --pharmacology--PD; * Eimeria ; Cells, Descriptors: Cultured; Eimeria --drug effects--DE; Eimeria --enzymology--EN; --growth and development--GD; Glucose-6-Phosphate Isomerase Eimeria --analysis--AN; Glucosephosphate Dehydrogenase--analysis--AN; Lactate Dehydrogenase --analysis--AN; Oxidoreductases--analysis--AN; Phosphoglucomu tase--analysis--AN CAS Registry No.: 0 (Coccidiostats) Enzyme No.: EC 1. (Oxidoreductases); EC1.1.1.27 (Lactate Dehydrogenase); EC 1.1.1.49 (Glucosephosphate Dehydrogenase); EC 5.3.1.9 (Glucose-6-Phosphate Isomerase); EC 5.4.2.2 (Phosphoglucomutase) Record Date Created: 19780127 Record Date Completed: 19780127 9/9/16 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 02477294 77167679 PMID: 859094 Isoelectric focusing of coccidial enzymes. Shirley M W; Lee D L Journal of parasitology (UNITED STATES) Apr 1977, 63 (2) p390-2, Journal Code: 7803124 ISSN 0022-3395 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS Tags: Animal Descriptors: Eimeria --enzymology--EN; Isoelectric Focusing; Isoenzymes; Lactate Dehydrogenase --isolation and purification--IP CAS Registry No.: 0 (Isoenzymes) Enzyme No.: EC 1.1.1.27 (Lactate Dehydrogenase) Record Date Created: 19770630 Record Date Completed: 19770630 9/9/17 DIALOG(R) File 155: MEDLINE(R) (c) format only 2003 The Dialog Corp. All rts. reserv. 02125300 76076735 PMID: 1202411 Enzyme variation in Eimeria species of the chicken. Shirley M W Parasitology (ENGLAND) Dec 1975, 71 (3) p369-76, ISSN 0031-1820 Journal Code: 0401121 Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS A method for the biochemical identification of protozoa belonging to the genus Eimeria is described for the first time. Starch gel electrophoresis enzymes lactate dehydrogenase, glucose phosphate isomerase, the 6-phosphogluconate dehydrogenase and glucose-6-phosphate dehydrogenase from parasite extracts revealed both intra- and inter-species differences when 11 strains representative of 6 species of Eimeria were examined. Oocysts parasite stage for investigation but the most accessible of an embryo-adapted strain of E. tenella merozoites sporozoites and were also examined for enzyme activity.

Descriptors: Chickens-- parasitology --PS; * Eimeria --enzymology--EN; Chick Embryo; Glucose-6-Phosphate Isomerase--metabolism--ME; Glucosephospha

Tags: Animal

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te Dehydrogenase--metabolism--ME; Lactate Dehydrogenase --metabolism--ME;
Phosphogluconate Dehydrogenase--metabolism--ME
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 (Phosphogluconate
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                                                        (Glucosephosphate
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DIALOG(R) File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
01460771
           73083928
                      PMID: 4346146
    Enzymes of coccidia : purification and properties of L-lactate
dehydrogenase from Eimeria stiedae.
  Frandsen J C; Cooper J A
  Experimental parasitology (UNITED STATES) Dec 1972, 32 (3) p390-402,
                 Journal Code: 0370713
ISSN 0014-4894
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: Completed
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Electrophoresis, Disc; Hydrogen-Ion Concentration; Isoenzymes; Kinetics;
                                      Methods; NAD; Oxidation-Reduction;
Lactates; Liver--microbiology--MI;
Pressure; Pyruvates; Rabbits; Temperature
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DIALOG(R) File 155: MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
          70113596
                     PMID: 5414955
    Eimeria stiedae: cytochemical identification of enzymes and lipids in
 sporozoites and endogenous stages.
  Frandsen J C
  Experimental parasitology (UNITED STATES) Feb 1970, 27 (1) p100-15,
ISSN 0014-4894 Journal Code: 0370713
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: Completed
  Subfile:
           INDEX MEDICUS
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                 Eimeria
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*Lipids--analysis--AN; Acid Phosphatase--analysis--AN; Alkaline Phosphatase
--analysis--AN; Eimeria --cytology--CY; Eimeria --growth and development --GD; Esterases--analysis--AN; Fructose-Bisphosphate Aldolase--analysis--AN
  Galactosidases -- analysis -- AN; Glucosephosphate Dehydrogenase -- analysis
          Glucosidases -- analysis -- AN;
                                          Histocytochemistry;
Dehydrogenase
                --analysis--AN;
                                    Leucyl
                                              Aminopeptidase -- analysis -- AN;
Metamorphosis, Biological
 CAS Registry No.: 0
                       (Lipids)
          No.: EC
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                                    (Lactate Dehydrogenase); EC 1.1.1.49
 (Glucosephosphate Dehydrogenase); EC 3.1.
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 (Alkaline Phosphatase); EC 3.1.3.2 (Galactosidases); EC 3.2.1.- (Gl
                                          (Acid Phosphatase); EC 3.2.1.-
                                    (Glucosidases); EC 3.4.11.1
Aminopeptidase); EC 4.1.2.13 (Fructose-Bisphosphate Aldolase)
 Record Date Created: 19700402
 Record Date Completed: 19700402
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9/9/20
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(c) format only 2003 The Dialog Corp. All rts. reserv.
                     PMID: 5701763
00547925
          69079196
    Eimeria
            stiedae: cytochemical identification of acid and alkaline
phosphatases, carboxylic ester hydrolases, and succinate, lactate, and
glucose-6-phosphate dehydrogenases in endogenous stages from rabbit
tissues.
  Frandsen J C
  Experimental parasitology (UNITED STATES)
                                            Dec 1968, 23 (3) p398-411,
ISSN 0014-4894 Journal Code: 0370713
 Document type: Journal Article
 Languages: ENGLISH
 Main Citation Owner: NLM
 Record type: Completed
            INDEX MEDICUS
 Subfile:
 Tags: Animal
 Descriptors:
                 Eimeria --enzymology--EN; *Enzymes--analysis--AN; Acid
Phosphatase--analysis--AN; Alkaline Phosphatase--analysis--AN; Esterases
--analysis--AN; Glucosephosphate Dehydrogenase--analysis--AN; Histocytochem
                 Dehydrogenase --analysis--AN; Liver--enzymology--EN;
         Lactate
Rabbits; Succinate Dehydrogenase--analysis--AN
  CAS Registry No.: 0
                      (Enzymes)
         No.: EC
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 (Glucosephosphate Dehydrogenase); EC 1.3.99.1 (Succinate Dehydrogenase);
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EC 3.1.
                                       (Alkaline Phosphatase); EC 3.1.3.2
 (Acid Phosphatase)
 Record Date Created: 19690217
 Record Date Completed: 19690217
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?ds

VAL NO 5/15

From: Sent: 4 Portner, Ginny

Thursday, May 15, 2003 11:41 AM

STIC-ILL

Cc: Subj ct: 🖫 Smith, Lynette

09/380,846; references requested for lactate dehydrogenase claims

2125300 76076735 PMID: 1202411

Enzyme variation in Eimeria species of the chicken.

Shirley M W
Parasitology (ENGLAND) Dec 1975, 71 (3) p369-76, ISSN 0031-1820
Journal Code: 0401121

Document type: Journal Article Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

(b) (ains) 100 Na (and de) 24 11.

NO

From: Sent:

Portner, Ginny

Thursday, May 15, 2003 11:37 AM

To: Cc:

Smith, Lynette

Subject:

STIC-ILL

09/380,846; references requested for lactate dehydrogenase claims

06920706 91161087 PMID: 2488045 Starch gel electrophoresis of lactate dehydrogenase and glucose phosphate

isomerase of poultry coccidia using the LKB multiphor.

Kucera J

Research Institute of Feed Supplements and Veterinary Drugs, Jilove,

Prague, Czechoslovakia.

Folia parasitologica (CZECHOSLOVAKIA) 1989, 36 (4) p295-9, ISSN 0015-5683 Journal Code: 0065750

Document type: Journal Article Languages: ENGLISH

Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Cortner CM1, Art Unit 1645 Room 7e13

Mail box 7e12 (703) 308-7543 36. 8. C33

Caim 13 16-18 16-183 mac

From:

Portner, Ginny

Sent:

Thursday, May 15, 2003 11:36 AM

To:

STIC-ILL Smith, Lynette

Cc: Subj ct: 09/380,846; references requested for lactate dehydrogenase claims

Importance:

High

07299917 92162849 PMID: 1790225

Enzyme variation of Eimeria acervulina and E. tenella isolated from

poultry farms in Japan.

Nakamura T; Kawaguchi H; Imose J; Ogimoto K

Aburahi Laboratory, Shionogi Research Laboratories, Shionogi & Co., Ltd.,

Shiga, Japan.

Journal of veterinary medical science / the Japanese Society of Veterinary Science (JAPAN) Dec 1991, 53 (6) p1101-3, ISSN 0916-7250

Journal Code: 9105360

Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM

Record type: Completed Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

102(b) Claims 1-3

From:

Portner, Ginny

Sent: **T**:

Thursday, May 15, 2003 11:39 AM

STIC-ILL

Cc: Subject:

Smith, Lynette 09/380,846; references requested for lactate dehydrogenase claims

03068132 79246004 PMID: 471536

A reappraisal of the taxonomic status of Eimeria mivati Edgar and Seibold 1964, by enzyme electrophoresis and cross-immunity tests.

Shirley M W

Parasitology (ENGLAND) Apr 1979, 78 (2) p221-37, ISSN 0031-1820 Journal Code: 0401121

Document type: Journal Article Languages: ENGLISH Main Citation Owner: NLM Record type: Completed Subfile: INDEX MEDICUS

Ginny Rortner CM1, Art Unit 1645 Room 7e13 Mail box 7e12 (703) 308-7543

48.8.P2/

7,96

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